

Camp Navajo
Stakeholder Advisory Group (SAG)

Thursday, April 13, 2006
Camp Navajo
Bellemont, AZ

Minutes

Members in attendance:

Stacy Duffy, ADEQ
Christine Krosnicki, City of Flagstaff
LTC Pete Tosi, Camp Navajo
Lee Luedeker, AGFD
Glenn Morrison, community member
Randy Wilkinson, NGB

MAJ John Ladd, AZARNG Environmental
Dave Larsen, ADEMA Environmental -
Cultural
MAJ Bill Myer, NGB
Tom Parker, Camp Navajo

Members absent:

Tom Britt, community member
Shannon Clark, Coconino National Forest
Shaula Hedwall, USFWS
Karen Underhill, community member

Guests:

Kate Anthony, MKM
D. Ken Greene, CH2MHill
Kim Harriz, AMEC
Dana Downs-Heimes, CH2MHill
John Kim, Brown & Caldwell
Srinu Neralla, MKM Engineers
Marty Rozelle, The Rozelle Group, LTD.
Scott Veenstra, AMEC

Interested Parties:

Gavin Fielding, ADEMA/AZARNG
Environmental

The following acronyms may be used throughout this document

ADEMA	Arizona Department of Emergency and Military Affairs
ADEQ	Arizona Department of Environmental Quality
AGFD	Arizona Game & Fish Department
AZARNG	Arizona Army National Guard
BRAC	Base Realignment and Closure
CDC	Contained Detonation Chamber
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COPC	Contaminants of Potential Concern
EDMS	Electronic Data Management System
ERA	Ecological Risk Assessment
FOASA	Former Open Air Storage Area
FSP	Field Sampling Plan
FWPDBA	Former White Phosphorous Detonation and Burn Area (Chemical Canyon)
HHRA	Human Health Risk Assessment
IRP	Installation Restoration Program
HERA	Human Health & Ecological Risk Assessment
LTM	Long Term Management
MAP	Management Action Plan
MEC	Munitions and Explosives of Concern
MD	Metallic Debris
MWP	Master Work Plan
NAAD	Navajo Army Depot
NAU	Northern Arizona University

NGB	National Guard Bureau
OB/OD	Open Burn/Open Detonation
ORS	Ordnance Related Scrap
PBC	Performance Based Contract
ppb	parts per billion
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation and Recovery Act
RC	Response Complete
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy in Place
SAG	Stakeholder Advisory Group
SSHP	Site Safety and Health Plan
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WMM	Waste Military Munitions

The following matters were discussed, recommended, and/or decided.

1. *Welcome, Introductions and Announcements*

- Lee Luedeker chaired the meeting and everyone introduced themselves.
- LTC Tosi announced that his retirement and replacement again has been delayed.
- MAJ Myer's last day is May 15. His replacement, MAJ Brian Saunders has made a visit to the Installation and will out again the week of April 17. He will permanently relocate in early July.
- Lee acknowledged that Shaula Hedwall, Karen Underhill, Shannon Clark, and Tom Britt sent their regrets and could not attend this SAG meeting.
- Lee will contact Tom Britt, who has missed a number of meetings over the past year and ask if he is interested in continuing.

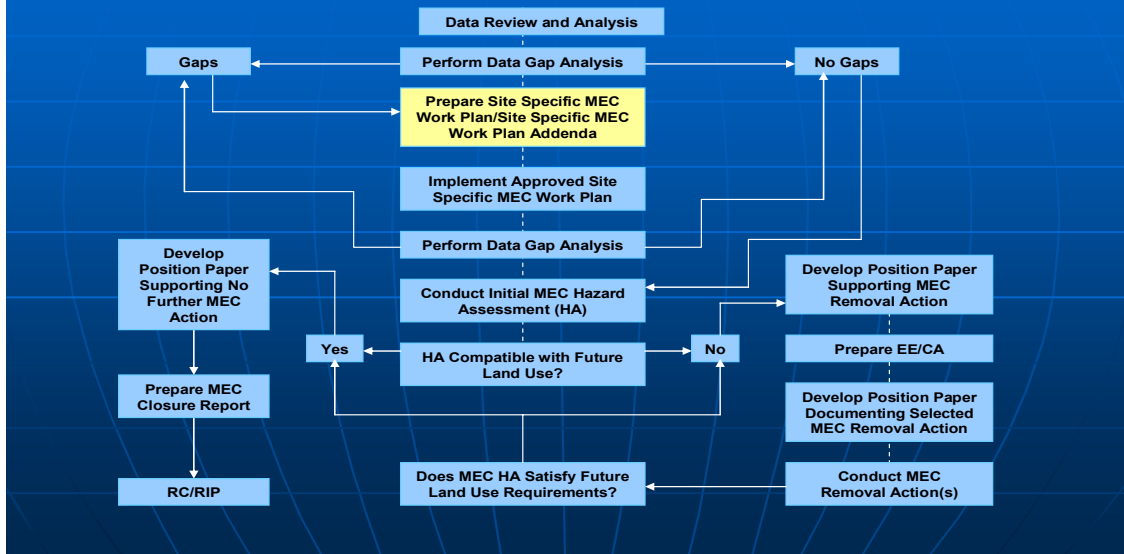
2. *MEC Characterization Approach*

CH2MHill Task Manager, Dana Downs-Heimes reviewed the approach to characterizing MEC.

The characterization activities have been divided into three main components. The first is the investigation of potential primary source areas. Primary source areas are those in which MEC may be found as a concentrated mass, such as former detonation pits, trenches, earthen mounds or other burial features. The second component is that of secondary source areas, represented by MEC that has been potentially scattered over a wide area as a result of kick-outs during detonation activities. Finally, an assessment of the distribution of munitions debris will be conducted. It is important to understand the potential distance that munitions debris or fragments might have been thrown, to better define the scope of potential cleanup actions. The following diagram shows the process for MEC removal actions and site closures. CH2M HILL is currently preparing the Site Specific Work Plan for review and approval.

Prior to planning MEC characterization activities, a Data Gap Analysis was conducted. This consisted of the collection and review of all available previous information regarding MEC at the OB/OD Area, a review of this information to determine its usability towards the characterization effort, and the performance of a Preliminary Field Reconnaissance. The Preliminary Field Reconnaissance was conducted October 3–November 10, 2005 as a limited data gathering effort to provide information to further guide the MEC characterization activities.

Exit Strategy Flow Diagram



To investigate MEC and munitions debris distribution, a grid cell pattern of 200-ft by 200-ft dimension was superimposed over all NAAD interior map surfaces and the area extending beyond the NAAD boundaries. The distance to extend the grid cell boundary was determined by calculating the greatest distance a fragment would be thrown, from the largest munition detonated at that particular NAAD site. This boundary represents the furthest extent to which characterization activities will be conducted, and will be confirmed during the MEC characterization activities. The distance and boundaries for NAAD 02 and NAAD 03 overlap in many areas, and as such, will be investigated as one boundary.

Specifically, the preliminary reconnaissance effort identified the following:

NAAD 01 – Old EOD Demolition Area

- Nine OD pits/source areas identified – all within NAAD boundary
- 23 grid cells investigated for MEC/MD distribution.

NAAD 02 – Open Detonation Area Primary Source Areas

- OD Pits – (more than 200) all within NAAD boundary
- Surface disturbance at south end of NAAD

NAAD 03 – FWPDBA Primary Source Area

- OD pits – all within NAAD boundary
- Suspected OD pit above earthen dam (still within NAAD boundary)

NAAD 01 and NAAD 02/03 MEC/MD Distribution

- 75 grid cells investigated
- 10 former Harding ESE grid cells validated
- 117 MEC items discovered in 22 grid cells
- MD discovered in 66 grid cells

NAAD 20 – Pyrotechnic Range

- Two potential primary source areas identified
- 3 grid cells surveyed for MEC/MD distribution
 - No MEC discovered
 - MD discovered in 3 grid cells

This data gap analysis information was used to develop plans for the MEC Characterization.

- The nine identified primary source areas at NAAD 01 will be investigated by careful excavation and examination of subsurface materials.
- At NAAD 02, eleven OD pits will be randomly selected for excavation and investigation to represent the more than 200 pits that have been identified.
- Geophysical surveys will be conducted at NAAD 03 to delineate the presence of primary source areas prior to excavation.
- The two cinder pads along the northeastern boundary of NAAD 20 will be investigated as primary source areas
- Secondary source areas (widely distributed MEC) will be investigated through surveys of randomly selected grid cells using hand-held magnetometers.
 - 96 grid cells will be investigated for NAAD 01
 - 109 grid cells will be investigated for NAAD 02 and NAAD 03
 - Storage pads 1,2, 5 and cinder pad north of NAAD 07 will be investigated
- Munitions debris will be investigated through surveys of bias-selected grid cells to test the peripheral extent of the characterization boundary.
 - For NAAD 01, 40 grid cells will be investigated
 - For NAAD 02/03, 57 grid cells will be investigated
 - For NAAD 20, 35 grid cells will be investigated

Quality control (QC) will represent a significant part of the MEC Characterization effort and will involve CH2M HILL technical people that are independent of the project team. 15-17% of the grid cells surveyed will be subjected to QC evaluation and documentation. Also, representatives from the U.S. Army Corps of Engineers will provide quality assurance by resurveying a percentage of the selected grid cells.

As a final component of the MEC characterization, a Hazard Assessment will be conducted to assess the potential for interaction between a receptor (humans, animals) and an item of MEC. Current and future land uses of the OB/OD Area also will be considered as part of this assessment. A standardized hazard assessment model will be used, such that collected field data can be used in whatever model is selected for use.

The draft Site Specific Work Plan is being reviewed by NBG. Following review and approval by ADEQ, field activities began in late April/early May 2006 and will continue through October 2006.

The MEC characterization is the last step needed to support clean-up decisions. Once NAAD 01, 02, 03 are characterized and receive ADEQ approvals, the extent of MEC contamination and density of that contamination will be known, and will allow for decisions regarding land use, to support such activities as training. Up until that time, the existing fence lines arbitrarily have been used to define the OB/OD Area. For example, the Metz Tank buffer area is bounded by a grazing lease fence, and is not necessarily related to the hazardous area, but served as a wide buffer zone for the OB/OD Area. This fence line may be drawn inward once characterization activities have been completed.

3. OB/OD and Field Work Update

Project Updates

NAAD 01 – The source of lead contamination is being removed.

NAAD 02 – This is the largest site in the OB/OD Area. The Draft RI Report and Human Health and Ecological Risk Assessment have been submitted for review to the USFWS and ADEQ. An interim removal action of some lead contamination in the soil is planned by Brown and Caldwell. Once this action is complete and the Risk Assessment is re-done, no further action for chemical contamination is expected. The contamination levels will be brought down to those acceptable for residential land use. UXO characterization will be conducted this summer by CH2M Hill.

NAAD 03 – The ADEQ and USFWS concurred there is no human or ecological risk, so no further cleanup action for chemical contamination is required.

NAAD 04 – The characterization report is being reviewed by the NGB.

NAAD 05– AMEC is preparing a work plan for an interim removal action

NAAD 06 – AMEC is preparing a human and ecological risk assessment which will be sent to ADEQ.

NAAD 07 – The field report is complete and has been submitted to ADEQ and USFWS.

NAAD 8A - The field report is complete and has been submitted to ADEQ and USFWS.

NAAD 8B – The RI is approved and no significant impacts were found in the Ecological and Human Health Risk Assessment. A Decision Document with ADEQ concurrence for no further action is expected.

NAAD 9A – All work is complete and approved by the regulators. No further action is required.

NAAD 9C – This \$2 million removal action is almost complete. Some metallic debris and ordnance-related scrap still needs to be removed and disposed. All recyclable materials have been sent off site. All together, 125 tons of metal and 400 ordnance items have been removed. Brown and Caldwell is completing a construction report documenting everything that has been done. Once the construction report is approved, the remedial goals will have been and it will become a closed site and can be restored.

NAAD 9D – The RI Report and the final ERA have been approved. No further action is needed and a Decision Document will be prepared and released for public comment.

NAAD 10 - All work is done and the report has been finalized.

NAAD 13 – The Decision Document is under legal review and, once approved, no further action is required.

NAAD 20 – The MEC characterization work will be complete this summer. No perchlorate was detected through the surface water sampling, so chemically, NAAD 20 has been closed. No more work at this site is expected.

E 76 - MKN has investigated suspect areas and found no evidence of mustard rounds. They are working with the former surveyor to convert the previous coordinates into the current system, to verify that the correct locations were investigated.

Program Updates

Surface and Groundwater Monitoring – Two deep soil borings were installed to 500 feet to further characterize the groundwater. No water-bearing zones were found all the way to 500 feet. This confirms that there is no laterally extensive shallow water under the OB/OD Area. These findings will be addressed in the Fall 2006 annual monitoring report.

Owl Survey – The first of four surveys begins the week of April 17. Harris Environmental will survey the OB/OD Area. The AGFD will survey the remainder of the installation.

Long-term management - The NGB team met with the regulators in March to outline the last steps of the program for long-term management. NGB will prepare a post-closure permit to address any chemicals or UXO to be left in place. Ground-water monitoring is a key component of post-closure permit.

Over the past 2 ½ years many processes have been institutionalized. These processes should accelerate the work schedule and approval process.

Randy distributed a chart showing all the open detonations performed to date. There have been seven events between January 15, 2004 and January 26, 2006. More than 1,000 items have been destroyed.

4. *Call to the public*

No one from the public was present.

5. *Action Items and Next Meetings*

The next meeting will be Thursday, July 20 at 6 PM. Lee will contact the Coconino National Forest office regarding availability of their meeting room. The October 12th meeting will be at Camp Navajo at 10 AM.

There were no action items.